

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of

Amendment of Part 90 of the)
Commission's Rules and Policies for)
Applications and Licensing of)
Low Power Operations in the Private)
Land Mobile Radio 450-470 MHz Band)

WT Docket No. 01-146
RM-9966

TO: The Secretary

REPLY COMMENTS OF DATARADIO COR, LTD.

Dataradio COR, Ltd. ("Dataradio") hereby files these Reply Comments in the above matter. In its initial Comments filed October 12, 2001, Dataradio advised the Commission that the July 24, 2001 Notice of Proposed Rulemaking in this matter ("NPRM") did not take into account the rapidly increasing need for non-voice communications and made too little spectrum available for data communications. Other commenters generally agree with Dataradio that data communications require additional spectrum and protection. The record demonstrates the following:

(i) Almost 90% of the respondents have a strong interest in enhanced services for data.

(ii) Mission critical applications protecting the health and safety of the United States population and key infrastructure are inextricably tied to non-voice operations in the low power frequencies addressed in this docket. It is critical that the Commission not adversely impact these operations.

(iii) As current and new technologies are deployed, and as digital migration (data) becomes the *de facto* technological solution for maximum spectral efficiency of voice and

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non-voice hardware, the distinction between voice and non-voice operations will become increasingly blurred—the Commission’s rules should accommodate this convergence by eliminating unnecessary technical distinctions between voice and non-voice operations.

(iv) A safe harbor for strictly non-voice operations must exist to address critical data operations. Voice operations on Group B channels should be authorized only to the extent that they are an integral part of the operation, maintenance and security of the non-voice application.

(v) The Commission’s rules should allow primary status or protected service area (“PSA”) for non-voice operations in Group A to accommodate the already extensive use of both fixed and mobile data applications on the Group A channels that came into existence as a means to address the inequity in non-voice to voice channels.

(vi) Technical equality in the rules for TPO and ERP for mobile, fixed and portable hardware is absolutely critical to an efficient pathway for digital migration. This must be extended to ERP for infrastructure and maximum allowable antenna height. The FCC should address this issue for all channel blocks except the itinerant Group C.

I. Virtually All Commenters Note That The Commission’s Rules Should Reflect The Increasing Need For Data Communications

In its initial Comments, Dataradio noted that the NPRM reflected the historical *status quo* existing at the time the LMCC plan was first written, without considering the technological or market force changes that have triggered the exponential growth in demand for non-voice applications in recent years. The majority of comments confirm this observation. Indeed, almost 90% of the respondents filed comments addressing the need for protection and expansion of channels for non-voice applications. These included comments of the Land Mobile Communications Council (LMCC), the United Telecom Council (UTC),

Motorola, Association of American Railroads (AAR), American Water Works Association (AWWA); American Petroleum Institute (API), Trimble and all respondents involved in medical telemetry and AMR applications.

Each of these commenters addresses various aspects of the need for increased channels or extended protection for non-voice operation. Nevertheless, these respondents, as leaders in this industry, have cumulatively made the case as put forth by Dataradio in its initial Comments that a fundamental, irreversible shift in the market towards non-voice operations has occurred. The commenters agree that the proposed rules for non-voice operations do not adequately address this irreversible evolution of the marketplace.

Non-voice operations meeting the true definition of “mission critical applications” that are vital to the security of the public infrastructure of the United States are inextricably tied to the frequencies being addressed in this NPRM. Dataradio raised this point, as did organizations representing these quasi-public safety entities. (See, e.g., comments of API, AWWA, UTC, LMCC, AAR.) Any failure by the FCC to accommodate these uses would adversely effect critical spectrum used for the operations, maintenance and security of vital national infrastructure.

The technical distinction set forth in the NPRM between voice and non-voice operations is an artificial distinction that does not address the current state of technology, and more importantly, it clearly does not reflect the future. While the FCC has sought to maximize spectral efficiency through re-farming, in order to address the requirements of the marketplace and be compliant with the rules, digital migration has become a *de facto* reality. As Motorola states, "The migration to digital modulation and the ability to provide data service on digital voice systems is blurring the distinction between ‘voice’ and ‘non voice’

signals and systems.” As noted by Dataradio in its initial Comments, digital migration makes voice what data is today—ones and zeros: voice is data. Moreover, data is more spectrally efficient than traditional voice systems, as reflected in comments filed by UTC and Motorola showing a 3:1 increase in spectral efficiency per channel.

Dataradio firmly believes that a small portion of the spectrum (Group B) addressed in this NPRM should be set aside as a safe harbor for non-voice operations. Allowing voice on a secondary basis on these channels would be incompatible with certain critically sensitive operations. However, Dataradio fully supports the comments filed by UTC and others that to the extent voice operations on Group B channels are required for the operation of non-voice systems, such operations should be authorized.

Dataradio also supports the comments filed by UTC addressing the need for greater flexibility in the allowance of primary status for fixed and mobile non-voice applications in Group A. Dataradio further supports UTC’s proposal to amend 47 CFR §90.187 by creating protected service areas (or PSA’s) for non-voice operations within Group A channels. This will protect mission critical applications and lead to a decrease in the disparity between channels designated for non-voice and voice operations. As shown by Dataradio in its initial Comments, the existing landscape of channel allocation and usage already reflects that the need for non-voice communications has far outstripped the limited number of Group B channels, with the result that non-voice communications are being carried out on all of the Group A channels.

Finally, Dataradio supports the comments filed by LMCC and UTC demonstrating the need for technical parity in TPO (5 watts) and ERP (6 watts) for fixed, mobile and portable hardware operating in Group A and B. Dataradio respectfully notes that maximum antenna

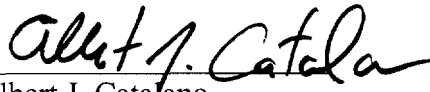
height and ERP also should be equal for infrastructure equipment, and this parity in standards should be extended to Group D as well. This will greatly enhance the efficiency of coordination, will result in cleaner contours, and will reduce potential interference. Ultimately, the Commission's goal should be to set a standard which will insure a clear clean pathway for digital migration (data), for both voice and non-voice operations—parity in technical standards is the best means to provide such a pathway.

II. CONCLUSION

In view of the foregoing, Dataradio respectfully requests that the Commission adopt rules in this proceeding consistent with the views expressed herein.

Respectfully Submitted,

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Its Counsel

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